



## Blue Force Tracking to Expand Across Force

Timothy L. Rider

**T**he military services plan to share unit location data better by installing tens of thousands of new systems being used by the coalition to track their deployed forces in Iraq and Afghanistan.

CPL Kevin Hoxworth from Sherman Oaks, CA, sets up the Precision Lightweight GPS Receiver for the Blue Force Tracking System to 7th Marine Regiment S-3 in support of *Operation Enduring Freedom*, Camp Ripper, Kuwait, March 12, 2003. (U.S. Marine Corps photo by GSGT Erik S. Hansen.)

Many of the “knowledge gaps” that have historically contributed to battlefield confusion and fratricide could be eliminated with the new Blue Force Tracking (BFT) systems. But U.S. Army officials are adamant that the new systems be fielded through cooperative efforts between the Army logistics community, the U.S. Air Force and the U.S. Marine Corps.

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BFT consists of a computer, satellite antenna and Global Positioning System (GPS) receiver. BFT displays the host vehicle’s location on the computer’s terrain-map display along with other platforms in their respective locations. BFT can also be used to send and receive text messages.

“More than 1,200 BFT systems were installed in combat vehicles, command posts and helicopters for operations in Iraq and Afghanistan,” LTC John Bullington, BFT Product Manager, remarked. “Users from the Army, Marines and United Kingdom praised the system for the clear ‘picture’ of ground forces it provided,” Bullington continued. “They said it saved lives, simplified coordination of units during maneuvers and provided a means of communications when units extended beyond the range of their radios. However, many more Soldiers need the system that haven’t received it yet,” he emphasized.

“When we talked to Soldiers, many said that they needed it installed in higher densities at the company level so that platoon leaders, first sergeants, support units and other key players would have better battlefield awareness,” Bullington remarked.

The decision to install BFT in units designated to deploy to Iraq was made Oct. 20, 2002. When operations commenced 5 months later, Bullington’s team of Soldiers, contractors and Department of the Army civilians had installed the systems at 42 different sites on 3 continents and had provided training.

“Prior to combat operations, we delivered everything that the combatant commander expected of us and everything that was possible given our resources,” Bullington noted. “Now the BFT office has been tasked to install the system on more vehicles, filling many of the gaps Soldiers identified,” Bullington explained. “As a result, more Soldiers will get an opportunity to train with and use this new technology.”

### BFT Fielding Goals

Work has already begun on plans to field nearly 40,000 tracking systems for the Army over the next 4 years. “The systems involved in the plans include BFT, the Force XXI Battle Command Brigade-and-Below (FBCB2) system — which uses the same operating software as BFT but with a ground radio antenna rather than satellite antenna — and a smaller, hand-held version of BFT called the Commander’s Digital Assistant,”

FBCB2 Deputy Project Manager Tom Plavcan extolled.

Bullington calls the BFT portion of the plan “touch ‘em in two, and fill ‘em out in four.” Under the plan, all active Army units that are currently without BFT or FBCB2 are scheduled to receive BFT at the same densities used during *Operation Iraqi Freedom (OIF)* within 2 years. Within 4 years, units will be “filled out,” receiving higher densities to include more vehicles within maneuver companies and combat support units.

### BFT Meets MTS

Another knowledge gap during *OIF* resulted from logistics and maneuver tracking systems not interfacing. “During *OIF*, supply units and logisticians used the Movement Tracking System (MTS) to locate supply and maintenance vehicles, which is very similar to what BFT does for combat platforms that are equipped with GPS, satellite communications and digital map display,” Bullington said.

“Neither tracking system has previously allowed users to view the locations of, or communicate with, one another, which can complicate linking supplies with the units needing them,” Plavcan explained. “The

reason is that each system was designed independently, one for logisticians, the other for maneuver forces — until now.”

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A Bradley Fighting Vehicle goes through a traffic control point run by the 82nd Engineer Battalion near Baquba, Iraq, on July 19, 2004. Mature technology will soon allow BFT and MTS data, designed independently, to be viewed on one screen as an integrated system. (U.S. Army photo by SPC James B. Smith Jr., 55th Signal Co., Combat Camera.)



## Joint Community Expresses Interest

“At the Joint BFT Situational Awareness Advanced Concepts Technology Demonstration held in Korea last March,” Plavcan continued, “personnel were able to integrate data from both systems so that regardless of which system the user viewed, they were able to see the location data from both systems on the display.

Because of ongoing operations in Iraq and Afghanistan, we’ve learned the value of this baseline information to other programs. Officials from the Air Force’s E-8C Joint Surveillance Target and Attack Radar System program have also expressed interest.

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Technicians for both systems are taking the lessons and technical applications developed for the demonstration in Korea and plan to apply them to both systems’ software and communications architectures worldwide within 4 years,” Plavcan remarked.

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information to other programs,” Plavcan pointed out. “Officials from the Air Force’s E-8C Joint Surveillance Target and Attack Radar System (JSTARS) program have also expressed interest.”

The Air Force’s JSTARS product manager invited BFT personnel to fly on a JSTARS aircraft in December 2003 when representatives from both programs discussed how to integrate BFT data into JSTARS.

“JSTARS radar is able to pick up and track ground movements, but it is not



Members of the British Army's 1st Battalion of the Queen's Lancashire Regiment roll down the road while on patrol in Iraq, Oct. 25, 2003. (U.S. Air Force photo by SSGT Scott T. Sturkol.)

always able to determine the type of vehicle or whether the movement was created by a friend, foe or neutral party," Plavcan said. "Integrating BFT data into JSTARS could help eliminate some confusion about what JSTARS is looking at on the ground."

Aside from reporting friendly force unit positions, the BFT computer has a mechanism for reporting enemy force locations and other battlefield conditions using its principal software applications. "Experiments have already been conducted to demonstrate that the data integration effort is technically feasible, but it's too early to say when the effort will be complete," Plavcan reflected.

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automatic updates on the locations of ground forces. One such effort focuses on feeding BFT ground location

data into the communications system used by the Tactical Air Party, the name for the team of Air Force liaisons embedded into ground combat divisions. Another effort focuses on feeding BFT data into Link-16, a tactical data and communications system that links Air Force command centers and aircraft.

"These efforts with the Air Force may give the fast movers better situational awareness and could be a significant factor in reducing air-to-ground fratricide," Plavcan remarked. "In fact, personnel from the Army and Marines are working together to devise tracking systems for tactical units at brigade-and-below that meet the requirements of both services. The DOD Joint Requirement Oversight

Council will be briefed on the plans in May 2005," Plavcan mentioned.

"The goal of this Joint initiative is to develop a common set of software applications to be used by the Joint services on the ground at the tactical level," Plavcan continued. "Doing so would improve communications and increase situational awareness."

"The Marines primarily use the Mobile Data Automated Communications system to provide situational awareness but installed more than 200 BFT systems during *OIF* so Marine locations would be visible in Army and United Kingdom command centers," Bullington concluded.

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